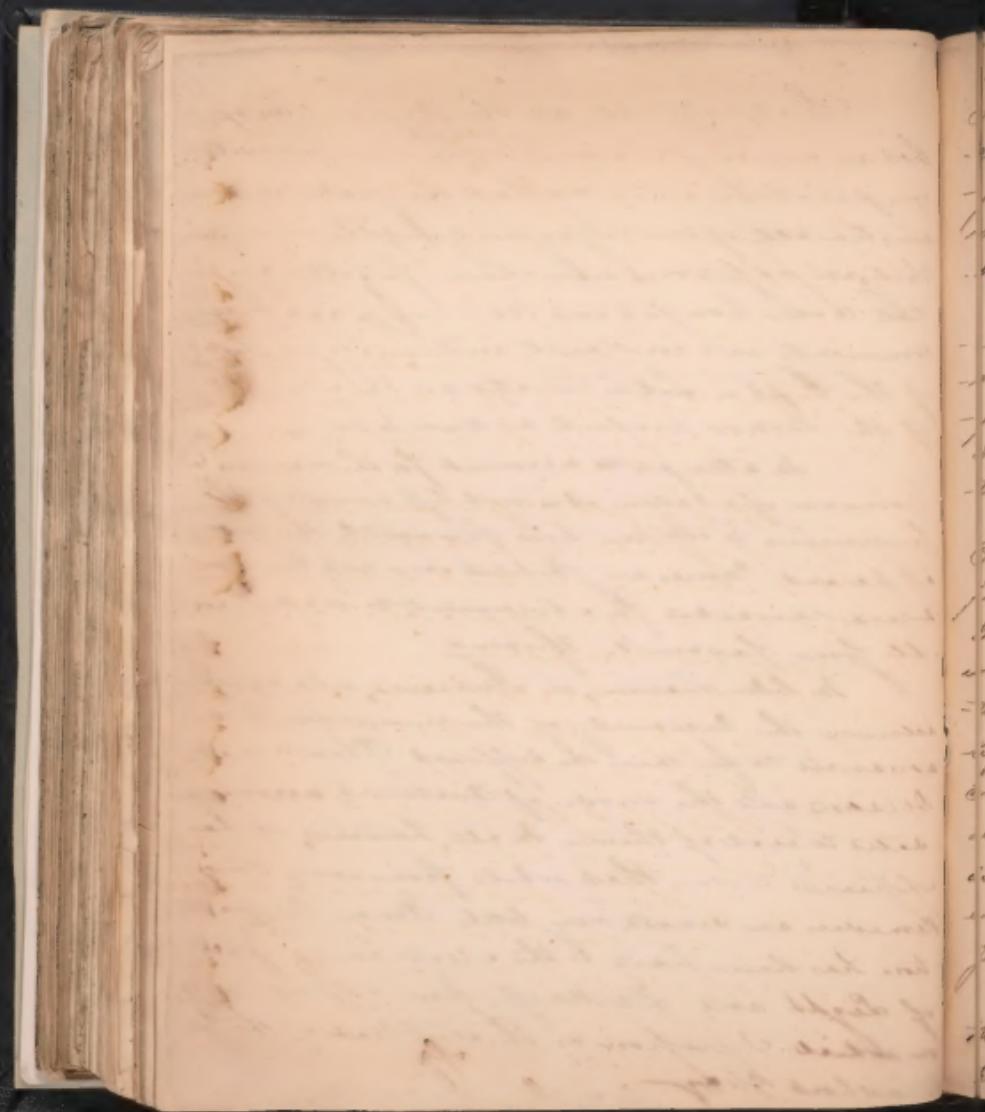


An
Inaugural Oration
on the
Medical Effects
of
Light and Darkness
by
Thomas Fuller Esq.
of
Beaufort Carolina —

Sick, naturally, are the dispositions of all
that in our constant anxiety ^{and desire} for things, moral but
comparatively unimportant the greatest and most
unimportant of our enjoyment, because occurring
daily, are passed over unheeded. Forgotten as far as
the well comfort and happiness and because
commonly and constantly continued to us, the value
of the gift is not estimated nor the claim, either
of the donor properly acknowledged.

In attempting to account for the various the
motions of Nature, it is not less amazing than
surprising to observe how frequently the more
apparent causes are left out and the more
accuse ransacked for arguments to make prob-
-able your favorite theory -

In like manner, in Russia, who can but
admire the ingenuity of the numerous theories
advanced to explain the different Phenomena of
Disease and the modes of Treatment according
- to each of them. In all, however, it has
appeared to me, that while from every Kingdom
Remedies are derived, very little, I may say, posterior
- to this has been paid to the Medicinal Effect
of Light and Darkness. From observations
on this I propose as the subject of the follow-
ing short Essay.

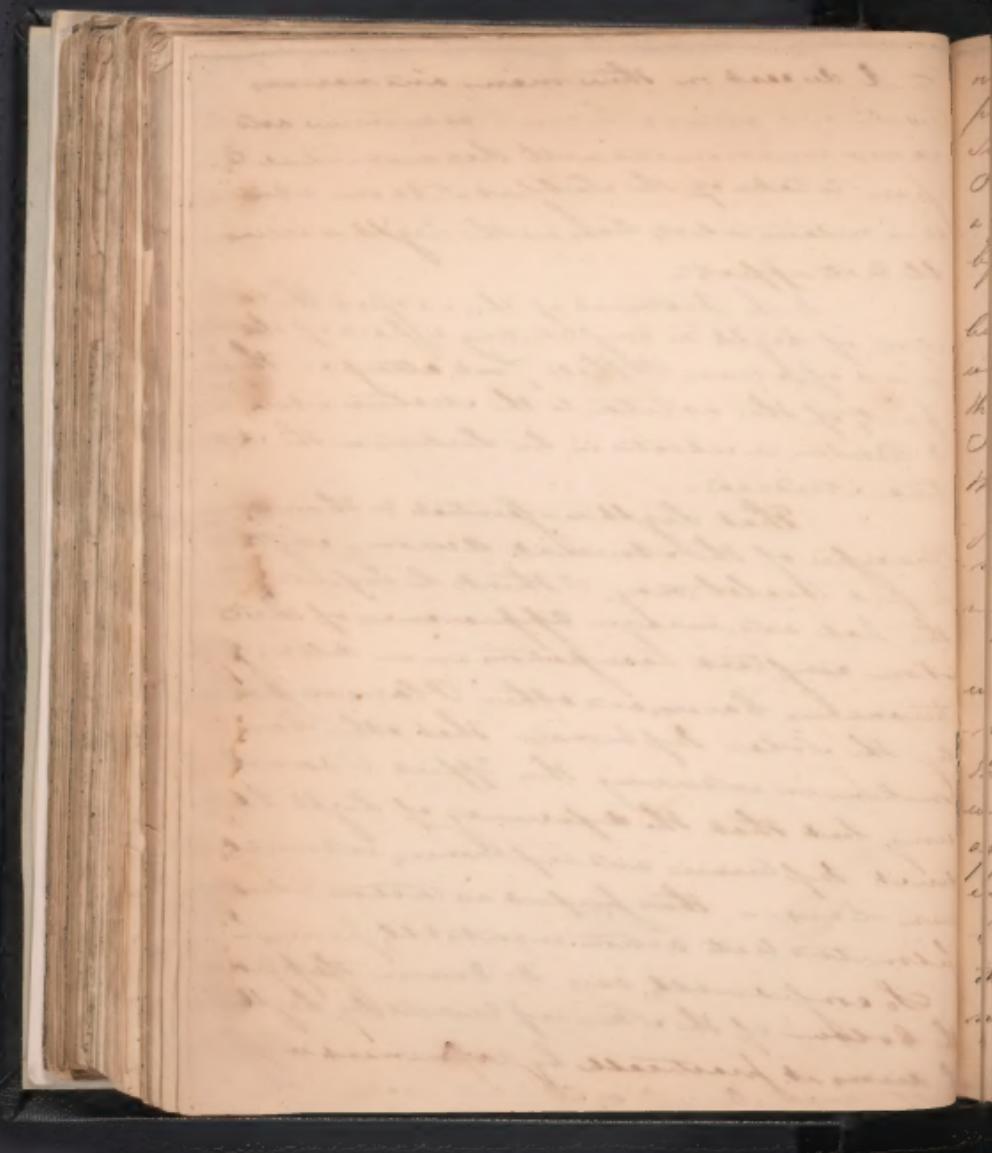


A descent on these many and various effects I will not attempt because it is too extensive and will cause unconnected with that view which I propose to take of the Subject - No one knows it is certain which lies in the light or causes all its effects -

In the Treatment of this Subject the consideration of light as constituting a part of the elements of Health shall first attempt - The peculiarity of this addition to the Materia Medica Dr. Dalton in relates in his Lectures on the Medical Juris -

That light is essential to the carrying on of the functions of the animal economy and that perfect Health may I think be inferred from the pale and meagre appearance of those whom constant occupations are in Cellars, galleries, Caves and other Places impervious by the Solar rays - That other Causes combine in inducing this effect I do not deny but that the deficiency of light has direct influence and my theory, I venture, however, says - that perfect health is to be attributed to its action incontestably proves -

So confidently does Dr. Dawson stop upon the belief of the curing of blindness by light that he deems it practically by confinement in the dark



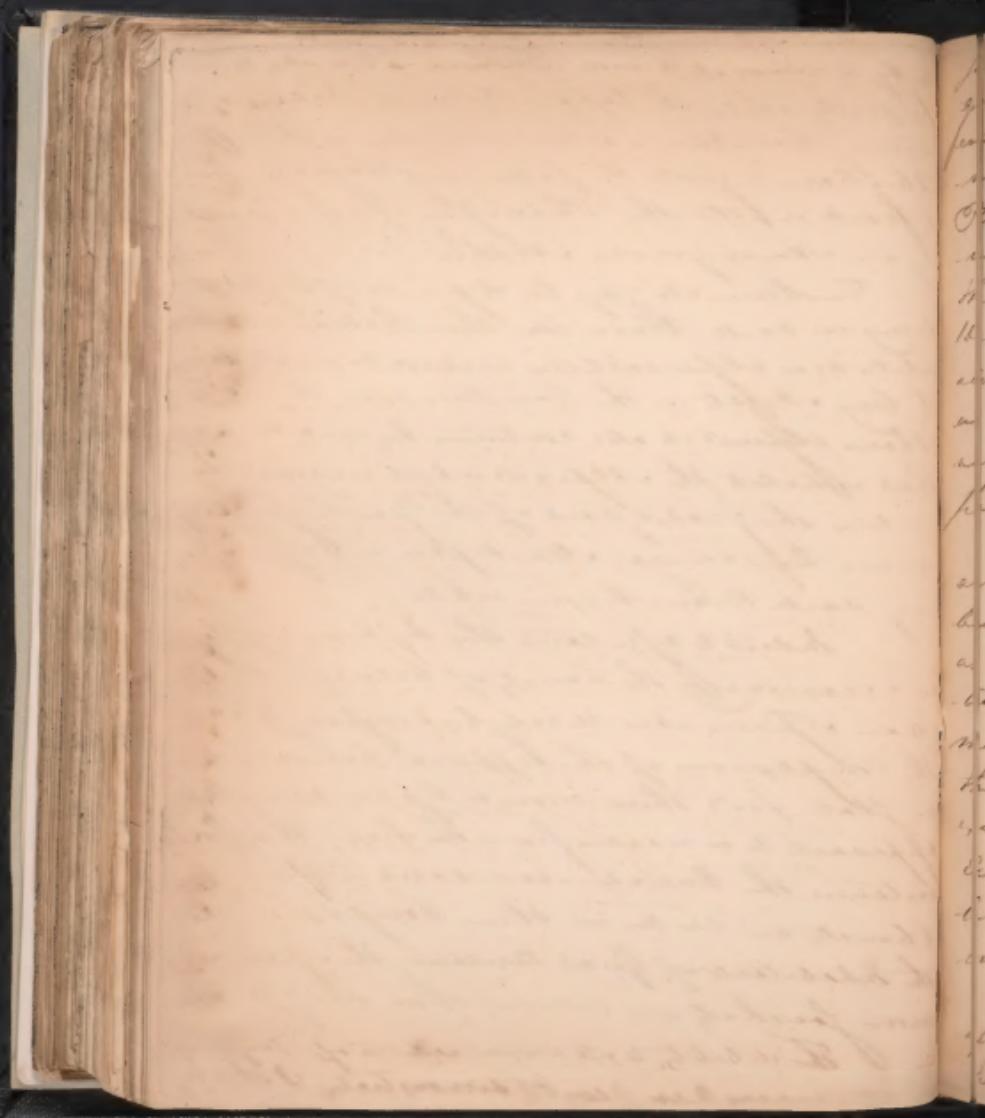
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or by a removal to snow & other climates, to which
perfectly white the Copper Coloured statues of
Sunny Countries. It is as evident of this effect
I shall have to quote the following passage from
a work entitled the Philos of Physick written
by an anonymous author.

Animals, says he, deprived of light or
living in dark places, lose their colour and become
white as is observed in Arctic animals, during
the long nights in the Countries near the Pole.
I have observed it also, continues he, in animals
that inhabit the Alps, and which conceal them
during the greater part of the year in paths
near Ispillings. The kept in a cage in a
very dark room become white.

Indeed to ascertain the influence of light
in occasioning the variety of Colour in the hu-
man Species, it will only be necessary to compare
the Complexions of the different Countries, and
we shall find them more or less dark as they
appear to or recede from the sun. Thus for
instance the French who inhabit a more南方
Climate are darker in their Complexion than
the Inhabitants of Great Britain. The Spaniards
more perfectly or brown than they do.

The debility, and emaciations of Persons
& otherwise employed demonstrate, I think,



satisfactorily. The effect of its absence on the general health - The partial and sometimes entire deprivation of this indispensable element in Dungions, Cells and other gloomy Places of confinement with the dampness, would all in consequence of its exclusion apply the same of very great injury done to the health of the Prisoners, themselves confined and also the reason why the mean sort of Health in Great Britain darkened on account of the very heavy Window Tax which a law of such late and unhealthy habitants -

As upon a Subject interesting like this a very surprising few Experiments have been made to ascertain the effects of light as they respect the absolute necessity of the abolition of this instrument to every other for the maintenance of firm Health, and as between the animal and vegetal Kingdoms there exists an analogy strikingly great a few Examples of its effects on the latter will, I hope, be admitted as demonstrating its very general importance to the former -

That light is requisite to the vegetation of Plants is acknowledged. I believe by all Botanists and certainly proved by their very

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not perfectly true - I. e. experience
there always towards the Window and there
seen in the dense Woods grow taller than
I ever saw them, for the pleasure of seeing
this beauty of fluid. At Walton-sleepe, the basket
of a Peasant-woman planted a Cabbage from me
it looks ^{very} ill, but there a man upon
the keep tower, few feet above, shone it
in the direction of the light and made
the plant grow. Then far well, with more
evidence by the colour of the white form follows
the sun and by the direction of these flowers -

that without Light Plant an colour
and become diseased is also certain. The invisible
is the cause of the expansion of light from the
Heaven is a gift of Colour and the Heaven has
blanching or blotting. This is a fact that a
green Colour may be continued to the leaves
of Copper, in a dark cellar, by the light of
common Lamp.

Brown
I have seen a good deal of light, etc.
I find that by a point, let's say on the
edge of a round window, and when all else
I tell not receive such a light as eddylite
or phosphorous Point. And this I think
will be best in attention to the Peter, which

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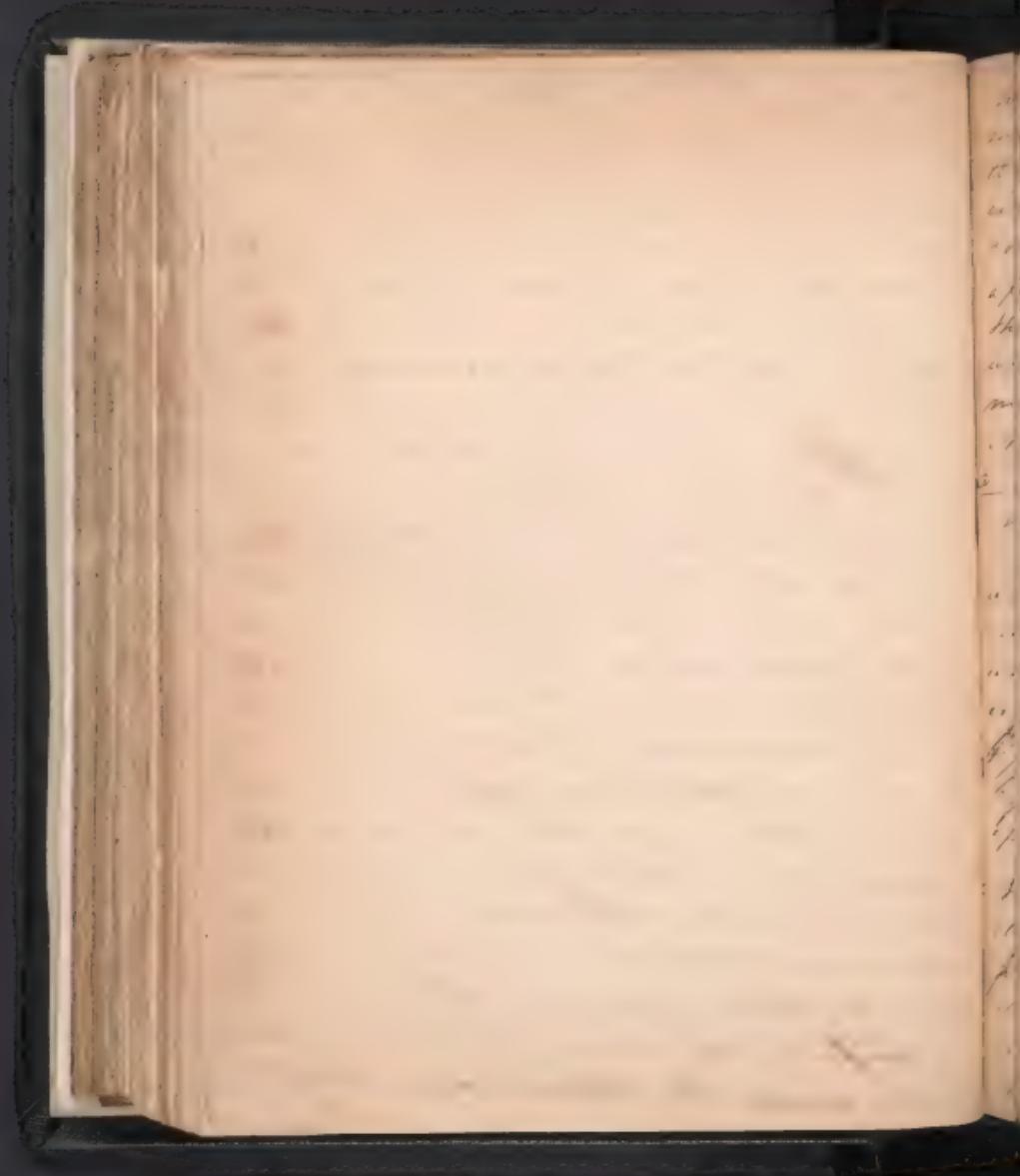
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placed in the room, increases as the
accents the vision, at the time is most prominent
for a while remains so and then with him and
him to be more certain of the effect increased on
a visual system by the stimulus of light. I have
a vol. the following experiment made by me
on a young gentleman my intimate acquaintance
at first attack Pals. The visibility of his
vision being greatly increased by an application
west of his head from two kinds of slender
I closed the windows of the Room in which he
had been since the day with a lamp
nearly extinguished. This was done, it perfectly
I find a minute after the total exclusion of
light. I examined his Pals, which beat with
a regularity exceeding regular and with a fre-
quency not exceeding fifty three strokes
the minute. His heart puffed an instant in
jolt. Having several times repeated the
examination with the same result, I caused
him a number of Cards to be suddenly
produced as to occasion a very sudden
The instantaneous effect was to impinge a
^{conscious} ~~conscious~~ ^{conscious} range of fears. - often
indeed after this illumination to perceive



subject on the Polar which was far west
say 8^o Elevation from fifty three it has an
to fifty five fathoms in the elements with an
increased degree of falling. This point he
conjectured with a latitude Eight or ten elements
afterwards, I mean by my examination and from
the Pole increased to fifty eight fathoms but
without any additional falling. Software is
made several examinations but appears no
difference.

The influence which light exerts on the ele-
mental spirits evinced it tumultuous -

Dr. Russel relates the account of a dwelling
which informed him that he has spent a con-
siderable part of his life in a castle during the greater part of
which the Sun was hidden but of night he
enjoyed until the uncommon brightness and
splendor both of which he supposed occasioned
by the long duration of a luminous day
of light.

To comprehend all its effects on Polar
regions by apprehension that the elevated and
upward position of their steeds are almost in
proportion to the splendor or obscurity of the
Solar Rays and hence an injury inflicts one
by superior luminous effusions on generally
the polar regions during the summer - This effect is

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very oppressive among the colds generally.
The stimulating effect of Sleep may also
be inferred from its preventing Rep by the
syptoms elevated above a certain & Rest calls the
Sleeping Point and it ceases in those
cases below it. Instances of a termination of
Sleep at the first Dawn of the Morning
are many and who, in a case of Typhus, has
not observed with satisfaction the success
of a pleasant and invigorating sleeping in
a night and unsupper Night - the extreme
configuration of the extremitie of the Light of
Common Candle, or a candle lighted by D Kins
as a deprivation of Sleep -

If other arguments be necessary to
prove this - the preception of the Darknes of
the Night w^t the light of the Day, affords a
most cogent one - so beautifull, &
mild appear to every observer, as all the works
of Nature harmonized that we cannot infer
from the association of these perceptions an
acknowledgment that however oppo-
site other from mey appear, yet that "God
establishes the good of the other" - The Alter-
ation of night and day is one of the most
striking instances of this - When during the
winter, from the constant application of Strain

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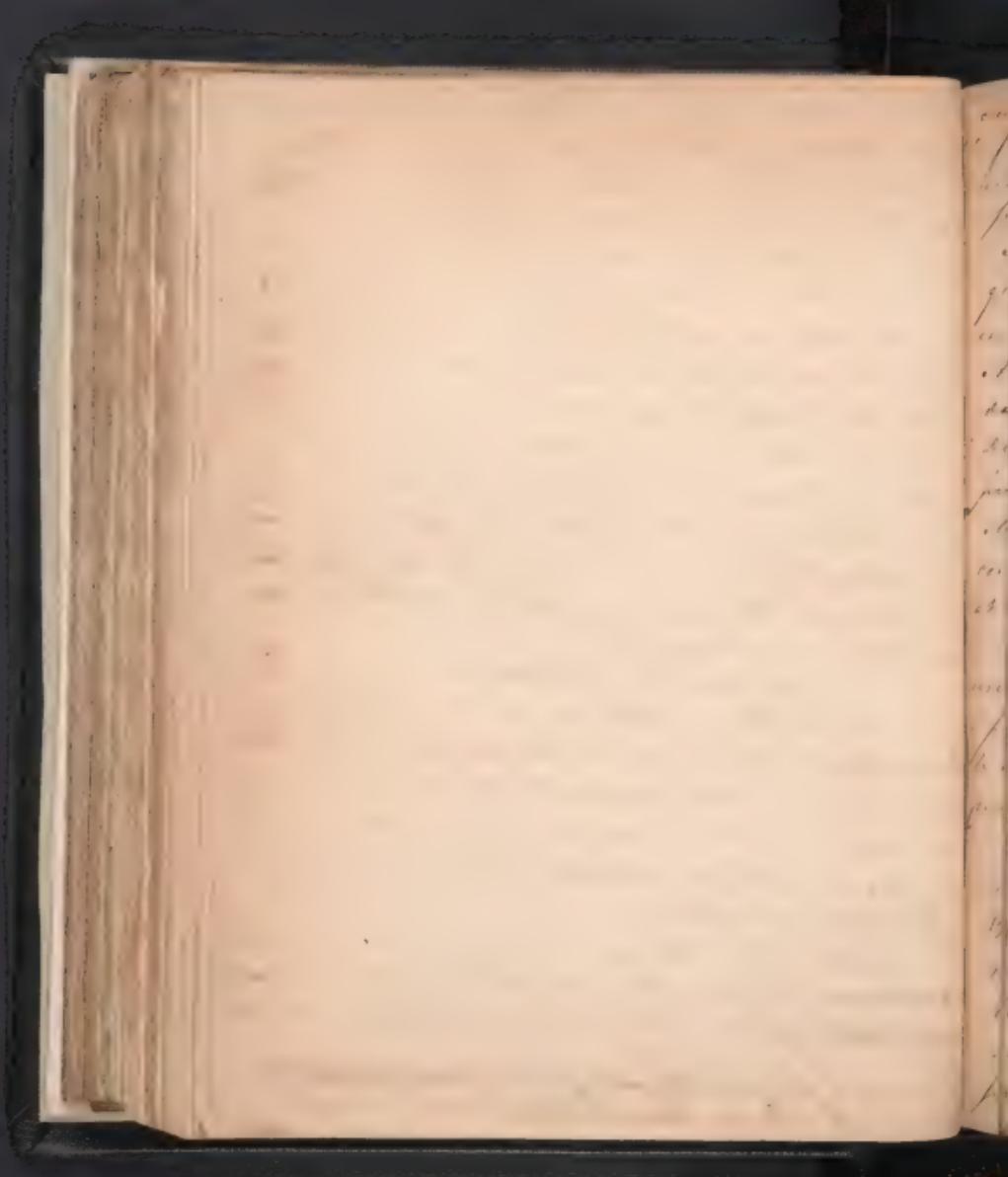
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and a man, who are one corporal, light &
the excitability of the system is induced. It can be
seen of excitement, in order as is requisite for
Health. In the restoration of the equilibrium of the
system, the stimulus of light being by it
removed, the excitability suffers a little elevation,
this small elevation exposes to rest and then
the gradual abstraction of stimuli. This is the
effect brought up sooner or later with the
excitement to reach what is termed the "Sleeping
Point". During sleep from the very few hours
rest, action of the system a sufficient quantity
of excitability is accumulated for the first attack
of stimuli the ensuing day. In this man-
ner rest is continued.

If then, as I think the above argument
shows, light is a stimulus, is it not supposing
that while in the lowest stages of chronic disease
such opinion would all the most baneful
medicines have been employed, no attention
ever paid to the regulation of the light and dark
parts of each regimen -

As from the want of opportunity to
practical observe alone on this subject an ad-
equate opinion I beg leave to postpone the following
the reason of apparently no darker a sleep with the
same observations during sleep.

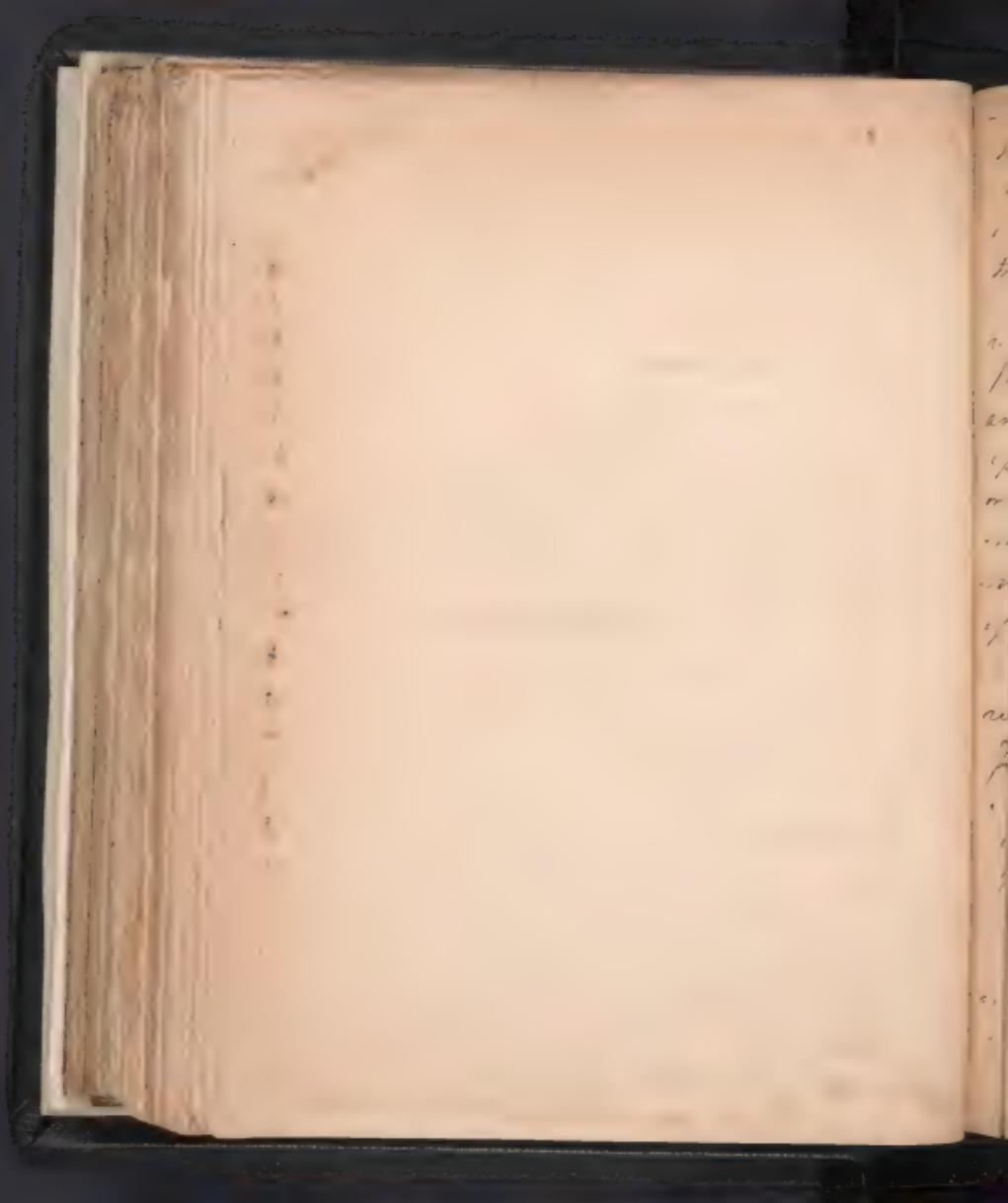


Suggestions

In those diseases of full action, with complete tetanization or ophtalmoplegia, failing which no more stimulating remedies may not the action of external stimuli greatly assist, by a full compression of light on exciting the Spleen and thus purifying it, & so on. It is a fact well known to every physician, that a disease may, only of death, occur in the night, occasioned no doubt principally by the abstraction of light. May not the want of most of external light & continuing there, Mental Stimulus be frequent, & hasty, to induce death?

In old chronic Ophtalmia, when all the usual remedies have been used ineffectually, a - ployce. But not highly probable that exposure to an intense light, by creating a new lesion, may be attended with some temporal effect.

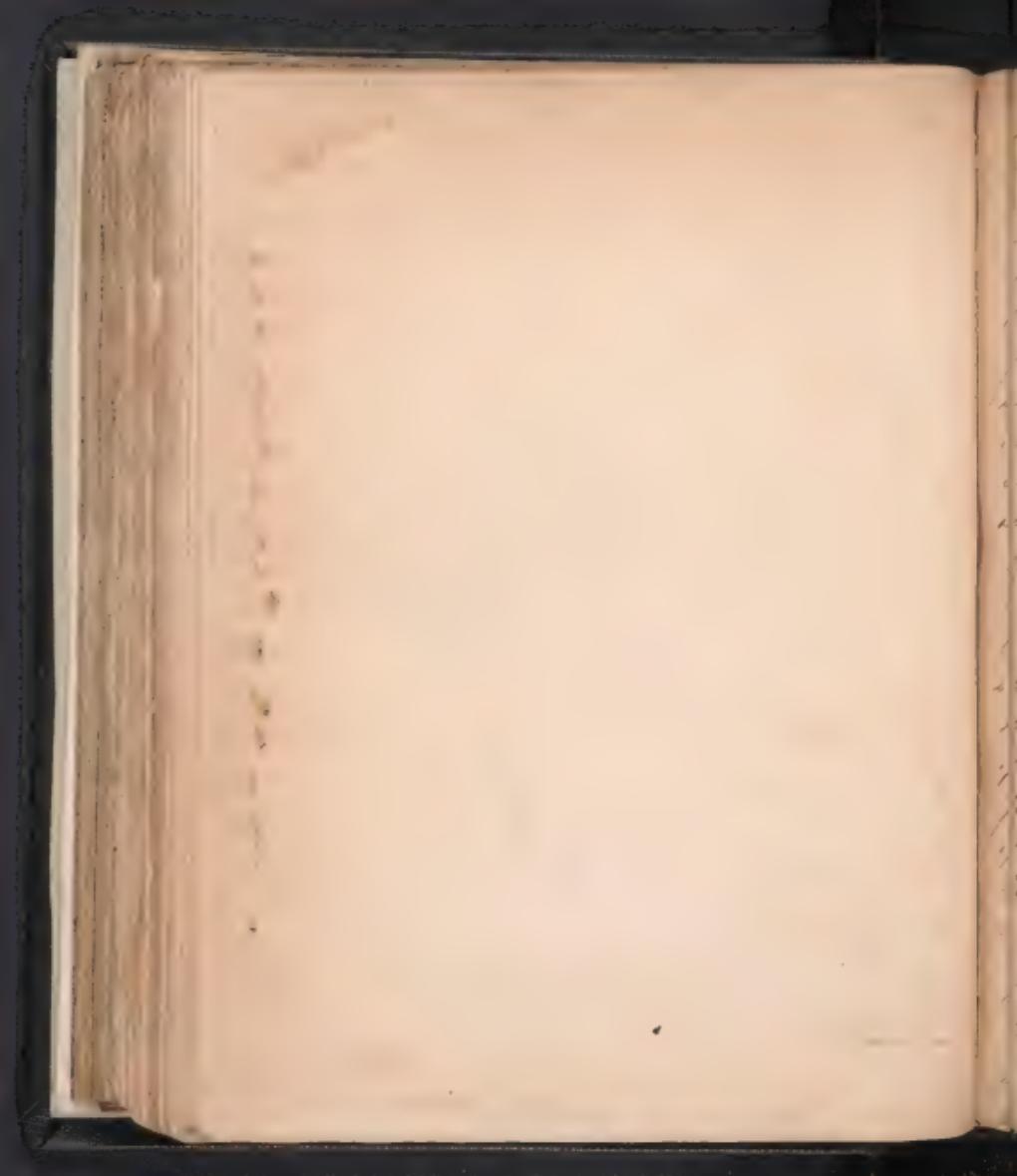
In clauacula, too, when Stimulus none has been but applied to a part of the Bod, as all connected with the Brain with a immediately or sympathetically. Is it not probable that one cause of the want of success attending these efforts, may be the administration past to the principal Stimulus of the Eye, when there will be most an ultimate



town & far is it not very presumption from
the want of effect exercised on the eyes by the
ear. What impressions made thin the one
of these organs, would not more efficacious
than those made thro' any other situation?

In short in all chronic Diseases or Troubles
affecting the Nervous system, but more parti-
cularly those connected with the Brain and Eye
and of these I would mention the chronic Eye
of Hydrocephalus Internus. H. peritoneo- or
or as more properly called by Dr. Rush "Ran-
ianitis" Intercranial or more properly Inte-
ranitis an attention to the proper canal
of this Troubles my Dr. I think under medi-
cal efforts has usually more efficacious and
removes in some measure that impression,
commonly laid on the Proptiorion-Venacula &
I hope of removing this I claim as my
right in Chamber of the Diseases as the ag-
itation of the Dignes of Head, so universally re-
curred to.

The increase or diminution of it having
as of every other Troubles should I think, be
usual —



I
Slavery is an affliction of eight years - it
is off the affliction of its slaves. Shall we
then leave other Masters unrefined, pro-
tected? To the Physician the advantage de-
rived from the employment of Bark of
Rhubarb in cold Diseases, may I think, be no
greater than that of an open window at the proprie-
ty of a Sick Room - by the partially obnoxious
smelling Decays left - and from constant as-
universals Customs, as in general, resort to it
almost unconsciously, as our first remedy.
But in this, as in many other Instances, in op-
ining the Dictates of Nature we are unsuccess-
ful. "In pleraria" beyond which, if pursued
she invariably runs back. This will according to
the person - names of the exitability & continuance
of the Systole, we stimulate & exasperate. So it is not
surprising that the unpropriet of a course
of the former degrees of Bark of Rhubarb in all the Sys-
toles as a plaster of Disease has not been
so much attended to -
the treatment of all Fevers with

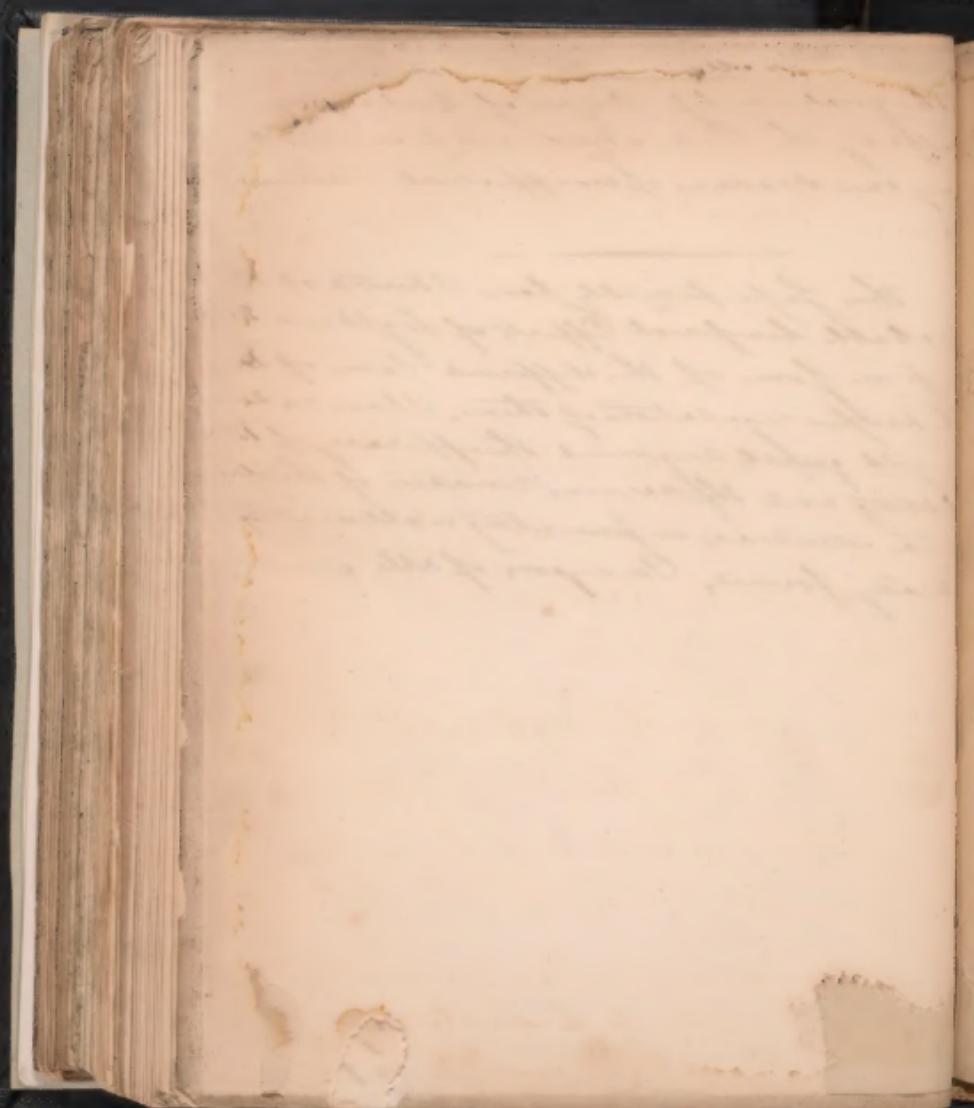
As in the Treatment of all Fevers with
Cephalic Interruption of Animal Heat and
Thaloma and alienia, its importance is
usually acknowledged and its employment
as far as I conceive it necessary, for the
cure of such diseases.

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twinship. In Malaria, however, an attention
to the greater or less degree of Darkness and
cold by the Pulse should not be omitted by
any one desirous of an official treatment of
it —

thus superficially have I hinted at the
probable beneficial effects of light and dark
in form or form of the different forms of Disease.
The proper regulation of them, I have no doubt
might effect, amongst the efficacy of Blood
letting and the various remedies of the tra-
ditional medicine, in preventing & alleviating the
already formed, Paroxysms of all —



1809

An
Inaugural Dissertation

for
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Doctor of Medicine.

submitted to
the Examination
of

John McDowell, M.L.D. Prosector

The
Trustees and Medical Professors

of the
University of Pennsylvania
by J. S. Linton

